

Eigenvalue and eigenfunction statistics for quantum star graphs

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Eigenvalue and eigenfunction statistics can be determined exactly in quantum star graphs. The eigenvalue statistics are intermediate between those of Random Matrix Theory and those associated with a Poisson process. The eigenfunctions exhibit strong scarring. I will review results obtained for these systems in collaboration with Gregory Berkolaiko, Eugene Bogomolny, Jens Marklof and Brian Winn.